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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,558	08/30/2001	Mamoru Shimoda	2936-0134P	6110

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
VAN HANDEL, MICHAEL P	
ART UNIT	**PAPER NUMBER**
2623	

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/941,558	SHIMODA, MAMORU	
	Examiner	Art Unit	
	Michael Van Handel	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/05/2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is responsive to an Amendment filed 1/05/2006. Claims **1-10** are pending. Claims **8-10** are new.

Response to Arguments

2. Applicant's arguments, see p. 4, l. 9-17, filed 1/05/2006, with respect to the rejection(s) of claim **1** under Yonekura et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Saito.

Claim Objections

3. Claims **4, 6** are objected to because of the following informalities:

The phrase "the frequency multiplier circuit" lacks antecedent basis. The examiner notes that claims 4 and 6 depend upon claim 1, which fails to recite a frequency multiplier. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims **1**, **8** are rejected under 35 U.S.C. 102(e) as being anticipated by Saito.

Referring to claims **1** and **8**, Saito discloses a radio-frequency receiver comprising:

- a mixer 4 for mixing a received radio-frequency signal with a local signal to convert the radio-frequency signal into an intermediate-frequency signal or baseband signal (col. 5, l. 30-34)(Fig. 6);
- a local signal generator 7, 8;
- a level switcher 12 for switching an output signal level of the local signal generator 7, 8 (col. 5, l. 19-24); and
- a controller 6 for controlling the level switcher 12 according to a frequency of the received signal (the examiner notes that the level of the detected output signal is dependent on the frequency of the received signal)(col. 2, l. 55-60, col. 6, l. 44-50)(Fig. 5).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims **2-4, 6, 7, 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yonekura et al.

Referring to claim **2**, Saito discloses a radio-frequency receiver as claimed in claim 1, wherein a local signal generator comprises a voltage-controlled oscillator 7. Saito does not disclose that the local signal generator comprises a frequency multiplier circuit for multiplying a frequency of an output signal of the voltage-controlled oscillator. Yonekura et al. discloses a frequency multiplier circuit 37 for multiplying a frequency of an output signal of a voltage-controlled oscillator (col. 4, l. 66-67 & col. 5, l. 1-6). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Saito to include a frequency multiplier circuit for multiplying a frequency of an output signal of a voltage-controlled oscillator, such as that taught by Yonekura et al. in order to reduce the power consumption of a receiver (Yonekura et al. col. 1, l. 60-67).

Referring to claim **3**, the combination of Saito and Yonekura et al. teaches a radio-frequency receiver as claimed in claim 2, wherein the local signal generator includes a phase-locked loop circuit 35 for controlling an oscillation frequency of the voltage-controlled oscillator (Yonekura et al. col. 4, l. 49-65), and the controller controls the voltage-controlled oscillator through the phase-locked loop circuit by using a control signal (Yonekura et al. col. 5, l. 42-45), and also controls the level switcher by using another control signal corresponding to the control signal (Saito col. 6, l. 32-35).

Referring to claim **4**, the combination of Saito and Yonekura et al. teaches a radio-frequency receiver as claimed in claim 1, wherein the level switcher comprises a regulator and a switch for varying an output voltage of the regulator, and varies a gain of the frequency

multiplier circuit by using the output voltage of the regulator (the examiner notes that the detector controls the ON and OFF states of the transistors)(Saito col. 6, l. 44-50).

Referring to claim **6**, the combination of Saito and Yonekura et al. teaches a radio-frequency receiver as claimed in claim 1, wherein the local signal generator comprises a plurality of VCOs 53, 55 and a VCO switcher 63 for switching among the VCOs so that one of the VCOs is selected and connected to the frequency multiplier circuit at a time (Yonekura et al. col. 7, l. 18-40).

Referring to claim **7**, the combination of Saito and Yonekura et al. teaches a radio-frequency receiver as claimed in claim 6, wherein the controller controls both the level switcher and the VCO switcher according to the frequency of the received signal (see claims 1 and 6 above).

8. Claim **5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Saiko in view of Pugel.

Referring to claim **5**, Saiko discloses a radio-frequency receiver as claimed in claim 1. Saiko does not disclose that the radio-frequency receiver is for receiving digital satellite broadcast. Pugel discloses a digital satellite video signal receiver (col. 5, l. 33-41). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Saiko to receive digital satellite video signals such as that taught by Pugel in order to increase the amount of information that can be transmitted to the receiver and increase the number of users that can easily receive the information.

9. Claims **9, 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Yoshisato.

Referring to claims **9** and **10**, Saito discloses the method of claim 8, wherein the step of generating a local signal using a local signal generator comprises the step of generating a voltage controlled oscillator signal using a voltage controlled oscillator. Saito does not disclose a step of multiplying the voltage controlled oscillator signal by a multiplier. Yoshisato discloses a multiplier 15 for doubling the frequency of a VCO (col. 5, l. 30-31). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Saito to include a multiplier for doubling the frequency of a VCO, such as that taught by Yoshisato in order to reduce the power consumption of the receiver.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Van Handel whose telephone number is 571.272.5968. The examiner can normally be reached on Monday-Friday, 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 571.272.7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Van Handel
Examiner
Art Unit 2617

MVH

VIVEK SRIVASTAVA
PRIMARY EXAMINER